

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VEHICLE IP, LLC,

Plaintiff,

v.

AT&T MOBILITY LLC,
CELLCO PARTNERSHIP,
NETWORKS IN MOTION, INC.,
TELECOMMUNICATION SYSTEMS,
INC. and TELENAV INC.,

Defendants.

C.A. No. 09-1007 LPS-CJB

**PLAINTIFF'S OPPOSITION TO DEFENDANTS' MOTION
FOR JUDGMENT ON THE PLEADINGS UNDER 35 U.S.C. § 101**

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I. INTRODUCTION

The asserted '377 patent claims recite patentable subject matter. As to the first step of the § 101 inquiry, the claims here are not directed to an abstract idea because they recite an system of specialized equipment, including a dispatch (which this Court held was “not just any computer-based system remotely located from the vehicle”) and a mobile unit (comprising a GPS receiver, cellular telephone, speaker, and display) to determine an expected time of arrival, provide audible information regarding an upcoming way point, and display the way points on a map. In fact, the Federal Circuit itself has already found that the '377 is not “directed to” an abstract idea, but to “improving vehicle navigation systems through more efficient distribution of navigation functions between a remote dispatch and a mobile unit located in the vehicle.”

Defendants wrongly ignore the Federal Circuit’s finding and the concrete, tangible claim elements that undermine their allegation of an abstract idea. Instead, Defendants rely on vague characterizations about the “basic concept” and “heart” of the claims. This approach is fatally flawed because the law requires an analysis of the entirety of the claims, and indeed warns against, such high-level characterizations. Defendants’ human activity argument also fails because humans cannot actually perform the claimed steps or achieve the claimed result.

Even if the claims were directed to an abstract idea, they recite an inventive concept that renders them patent eligible. Defendants do not allege that the asserted claims preempt an abstract idea, nor could they. The claims recite a distributed system with specific functions assigned to the claimed equipment that provides “significantly more” than the alleged abstract idea of determining an expected time of arrival. The fact that the claimed solution is rooted in computer technology to overcome the problems with existing technology and that the claims satisfy the machine-or-transformation test only further establish that the claims meet the requirements of § 101 and, therefore, Defendants’ motion should be denied.

II. NATURE AND STAGE OF THE PROCEEDINGS

Vehicle IP filed this infringement action against Defendants in 2009. (D.I. 1.) In late 2011, the Court construed several terms in the '377 patent. (D.I. 168.) The Defendants filed summary judgment motions based on those constructions, which the Court granted in early 2013. (D.I. 241.) In late 2014, the Federal Circuit reversed the Court's construction of two terms, vacated the judgment of noninfringement, and remanded the case back to this Court for further proceedings. Last month, Vehicle IP narrowed the case by electing 15 asserted claims. (D.I. 306.) Fact discovery closes on January 28, 2016 and dispositive motions are due June 2, 2016.

III. SUMMARY OF THE ARGUMENT

1. The '377 patent claims are directed to a distributed system that includes a remote dispatch and a mobile unit with specialized equipment that performs specific functions to provide the most accurate expected arrival time and improved features for the driver. These specific systems and methods are patent-eligible under 35 U.S.C. § 101.

2. The claims are not directed to algorithms, formulas, economic principles, or business methods. Nor are the claims directed to generic computer elements tied to conventional human activity. They are directed to concrete, tangible, special purpose equipment that provides a meaningful limit on their scope. Thus, the claims satisfy the first step of the § 101 inquiry.

3. With respect to the second step, the claims do not raise any concerns of preemption, and when the claim elements are considered in combination or individually, they add something substantially more to any abstract idea alleged by Defendants. The analysis in *DDR Holdings* also establishes that the claims include an inventive concept because they are rooted in computer technology to overcome the problems with existing mobile communications technology. Finally, the claims meet the requirements of the machine-or-transformation test, which further establishes that the claims recite patent eligible subject matter.

IV. CONCISE STATEMENT OF FACTS

A. The Claimed Inventions Solved Significant Technological Problems With Existing Navigation Systems.

The inventions disclosed in the '377 patent were conceived in the mid-1990s at a company called HighwayMaster, which developed award-winning technology for the long-haul trucking and service vehicle industries. The asserted claims fall into three groups: (1) systems that include a vehicle equipped with a “mobile unit” and a “dispatch” remotely located from the vehicle (claims 4-6 and 8-9), (2) mobile unit claims (claims 15-17, 19, and 21), and (3) methods performed by the mobile unit and remote dispatch (claims 25, 27-28, 30, and 32).

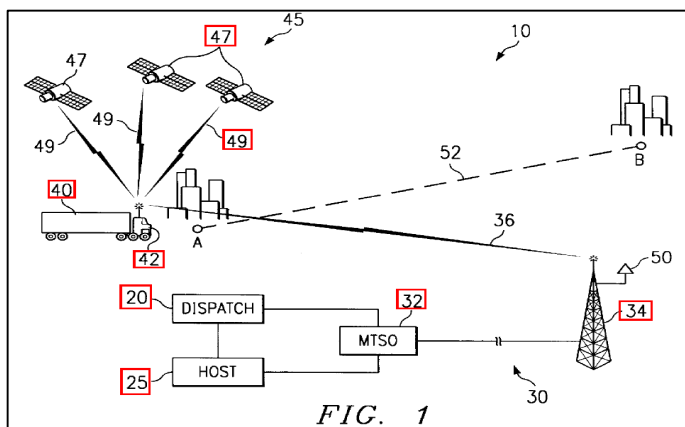
These systems and methods solved problems associated with mobile communications technology prevalent in the mid-1990s. (*See* '377 patent at 1:15-42.) For example, a typical architecture for a device that determined an expected time of arrival was an entirely self-contained system within the vehicle. This approach had several shortcomings, including significant costs required to install the necessary equipment in the vehicle, expensive maintenance to update information that became outdated (such as maps), and an inability to access and incorporate real-time information (such as traffic or weather) in the calculation of expected arrival times. Existing systems also suffered from the fact that they could not update the expected arrival time frequently as the vehicle navigated the route. (*Id.* at 1:29-34.)

The claimed inventions overcame these problems through a distributed system with a remote “dispatch”—a specialized computer system that, in addition to communication and processing functions, manages and monitors vehicles. To provide an accurate expected arrival time, the dispatch sends “destination information” to the mobile unit that includes a “plurality of way points,” which identify the destination and at least one additional point of reference ahead of the vehicle to define the route of travel. The mobile unit uses vehicle positioning technology

(such as GPS) in conjunction with the “way points” to determine an expected time of arrival as the vehicle navigates the route. (*See, e.g., id.* at 1:44-51, 2:9-23; 9:33-42.) The mobile unit can also consider traffic or weather information provided by the dispatch to provide even more accurate expected arrival times. (*See, e.g., id.* at 2:66-3:7, 6:22-27, 6:48-60.)

B. The Patented Systems and Methods Recite Specialized Equipment that Operates in an Unconventional Way.

Unlike many claims that fall victim to challenges under Section 101, the asserted claims do not implement mathematical formulas, algorithms, or conventional business practices. Nor do the claims recite a generic computer. Rather, the claims recite specific equipment that determines an expected time of arrival, among other things, in an unconventional way. Figure 1 provides an example of the claimed system for determining an expected time of arrival:



The Figure 1 example shows a vehicle (40) traveling between two cities (from point “A” to “B”). The mobile unit (42) is located in the vehicle and determines the vehicle’s current position, as indicated by the information streams (49) received from positioning satellites (47). The mobile unit communicates with the dispatch (20) a transmitter (34) associated with a cellular telephone network. After receiving destination information from host (25) or alternative sources, the dispatch generates destination information tailored for the mobile unit. (*Id.* at 2:66-3:7, 4:56-59.) The destination information may include way points (which can include destinations), route

information, traffic and weather information, and the like. (*Id.* at 3:1-7.) The mobile unit receives the destination information from the dispatch, determines the vehicle’s position, and determines the expected arrival time of the vehicle using the way points. (*Id.* at 1:62-65, 5:5-16, 5:53-6:7.) In the Figure 1 example, the mobile unit uses GPS technology to determine the vehicle’s position along the route. (*Id.* at 5:17-52.) As the driver navigates the route, the mobile unit can assist the driver by providing audible information regarding an upcoming way point and also display the way points on a map. (*Id.* at 11:38-45.)

V. ARGUMENT

A. The Claims Are Not Directed to An Abstract Idea.

1. Defendants fail to apply the correct legal standard and therefore do not meet their burden of establishing an abstract idea.

Under step one of the § 101 analysis, “the *claims are considered in their entirety* to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Networks, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015) (emphasis added). Defendants fail to apply this legal standard by incorrectly (1) looking for the “basic concept” or “heart” of the claims, as opposed to the entirety of the claim elements, and (2) analyzing a single claim without providing any rationale why that claim is representative (and it is not). (*See Br.* at 7 (stating that the “goal of this step is to identify the ‘basic concept’ or ‘heart’ of the claims” and analyzing only claim 23 based on the unsupported conclusion that the other claims “are no different from the method claims in substance”).) Defendants’ analysis is insufficient under the law, and their motion should be denied for this reason alone.

First, Defendants’ goal-oriented approach of ignoring the entirety of the claim language and instead focusing on the “basic concept” or “heart” of the claims is belied by the very cases Defendants cite for that proposition. For example, in *Alice*, in contrast to Defendants’ approach

here, the Court reviewed *all* of the limitations of *each* of the agreed-upon representative claims. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2352 n.2, 2356 (2014). Likewise, in *Bilski*, unlike the Defendants here, the Court considered the entirety of the claims, including dependent claims that added additional elements. *Bilski v. Kappos*, 561 U.S. 593, 599 (2010); *see also Alice*, 134 S. Ct. at 2355-56 (restating the entirety of the claim elements at issue in *Bilski*). In *Content Extraction*, the parties agreed that two claims were representative, and the Federal Circuit addressed all three claimed method steps in its analysis. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1345-47 (Fed. Cir. 2014). Finally, in *Ultramercial*, the Federal Circuit considered all eleven steps – not just one or two of those steps – in a claim directed to displaying an advertisement in exchange for access to copyrighted media. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714-15 (Fed. Cir. 2014).

Defendants' flawed approach of focusing only on certain claim limitations is exactly what the Supreme Court warned against in *Alice* when it stated that, although certain things are not patentable under § 101, the Court must "tread carefully in construing this exclusionary principle lest it swallow all of patent law. At some level, 'all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" 134 S. Ct. at 2354. This Court made the same observation stating that "[i]f one looks at almost any patent from far enough away, it would arguably claim an abstract idea. Alexander Graham Bell's patent could be said to claim the abstract idea of oral communication." *Messaging Gateway Solutions, LLC v. Amdocs, Inc.*, No. 14-00732, 2015 WL 1744343, at *5 (D. Del. Apr. 15, 2015).

Because they have failed to consider the entirety of the claims as required by Supreme Court and Federal Circuit precedent, Defendants have failed to satisfy their burden to show that the claims are directed to an abstract idea. *See, e.g., SimpleAir, Inc. v. Google Inc.*,

No. 14-00011, 2015 WL 5675281, at *4 (E.D. Tex. Sept. 25, 2015) (“Though Defendants argue that the Patents-in-Suit are directed to the abstract idea of ‘packaging and transmitting information,’ Defendants do not explain how such a characterization, which ignores significant claim limitations, encompasses the invention claimed by the Patents-in-Suit. Such conclusory argument, without more, is not enough for Defendants to meet their burden of establishing that the Patents-in-Suit are directed to an abstract idea.”); *Cronos Techs., LLC v. Expedia, Inc.*, No. 13-1538-LPS, 2015 WL 5234040, at *2-3 (D. Del. Sept. 8, 2015) (J. Stark) (denying a § 101 motion based on defendants’ “piecemeal analysis” of claim 22 and failure “to address the concepts embodied in claim 22 *as a whole*”).

Second, Defendants take another impermissible shortcut by focusing on a single claim. Although courts have used representative claims in § 101 analyses, Defendants “must provide at least *some* meaningful analysis for *each* of the challenged claims.” *Cronos Techs.*, 2015 WL 5234040 at *2-3 (denying § 101 motion based on failure to articulate why each dependent claim related to same abstract idea as alleged representative claim) (emphasis added); *see also Triplay, Inc. v. WhatsApp Inc.*, No. 13-1703-LPS, 2015 WL 1927696, at *6 (D. Del. Apr. 28, 2015) (“[A] process in which a defendant seeks to have large groups of claims ruled subject matter ineligible after giving negligible attention to them strikes the Court as unfair and fraught with the potential for problematic decision making. In the end, as the moving party, Defendant bears the burden to demonstrate that its asserted Section 101 defense is well taken as to each claim.”).

Defendants do not even attempt to explain how method claim 23 could be representative of all the asserted claims. Indeed, method claim 23 *is not even one of the 15 claims asserted in this case*. While it is an independent claim from which five asserted claims depend, all five of those dependent claims include significant limitations that are not found in “representative”

claim 23.¹ These limitations include the use of a GPS receiver (claim 25), the use of expected travel speeds (claim 27) and traffic or weather information (claim 28) to determine an expected arrival time, communicating audible information regarding a way point (claim 30), and displaying the way points on a map (claim 32). Defendants fail to address these claim elements in their analysis, as well as those elements set forth in the asserted system and apparatus claims (which recite additional specialized equipment).

As a result of their failure to analyze the claims under the correct legal standards, Defendants' motion necessarily fails to establish that any of the asserted claims are directed to an abstract idea, and their motion should be denied.

2. The claims are directed to specialized systems and methods that constitute patentable subject matter.

A proper analysis of all the claim elements demonstrates that none of the asserted claims are directed to an abstract idea. Rather, the claims are directed to a distributed system that includes a remote dispatch and a mobile unit that performs specific functions to provide the most accurate expected arrival time and improved features for the driver. The claims recite specific, tangible equipment (such as a dispatch that manages and monitors vehicles and a mobile unit that includes a GPS receiver, cellular telephone, display, and speaker), and require that this specialized equipment function in a specific, narrowly-tailored, and unconventional way.

Both this Court and the Federal Circuit have already pronounced that the '377 patent claims are not directed to an abstract idea, but to improving vehicle navigation systems through more efficient distribution of navigation functions between a remote dispatch and a mobile unit:

Both patents are *directed at* improving vehicle navigation systems through more efficient distribution of navigation functions between a mobile unit located in the vehicle and a remote dispatch, yielding a more accurate determination of expected

¹ The other asserted claims depend from system claim 1 and apparatus claim 12.

time of arrival.

(D.I. 167 at 1; D.I. 241 at 2 (emphasis added).)

The '377 patent is ***directed to*** improving vehicle navigation systems through more efficient distribution of navigation functions between a remote dispatch and a mobile unit located in the vehicle.

Vehicle IP, LLC v. AT & T Mobility, LLC, 594 Fed. App'x 636, 638 (Fed. Cir. 2014) (emphasis added). Defendants do not acknowledge, much less address either of these findings.

Courts have found that claims to specific systems or specialized equipment, like those asserted here, are not directed to an abstract idea. *E.g., Intellectual Ventures I, LLC v. Canon Inc.*, No. 13-473-SLR, 2015 WL 6872446, at *19-22 (D. Del. Nov. 9, 2015) (concluding that claims reciting the operation of a scanner are not directed to an abstract idea); *Canrig Drilling Tech. Ltd. v. Trinidad Drilling L.P.*, No. 15-0656, 2015 WL 5458576, at *4 (S.D. Tex. Sept. 17, 2015) (finding claims directed to a physical apparatus and drilling process of controlled rotation by a specific amount and at a predetermined angle were not directed to the alleged abstract idea of “rotation”); *Freeny v. Murphy Oil Corp.*, No. 2:13-CV-791-RSP, D.I. 143 at 4-6 (E.D. Tex. May 22, 2015) (attached as Ex. A) (rejecting the generalization that the claim covered “changing prices from a central location” because it was directed to specific systems for controlling the display and management of product prices in physical stores, using specific types of electronic devices networked to operate in a specific manner).

The '377 patent claims include several examples of specialized equipment that show the claims are not directed to an abstract idea, the first of which is the “dispatch” that appears in all of the asserted claims. (*See* '377 patent claims 1, 12, and 23.) The “dispatch” limitation was one of three disputed terms during the claim construction process. Defendants contend, as they must, that the dispatch is a generic computer. (Br. at 12.) But their characterization is inconsistent

with the Court’s Claim Construction Memorandum Opinion. The Court construed “dispatch” to be a computer-based communication and processing system remotely located from the vehicle that manages and monitors vehicles. (D.I. 167 at 11.) Importantly, the Court specifically found that the dispatch was a specific system and “***not just any computer-based system remotely located from the vehicle.***” *Id.* (emphasis added). The “dispatch” element alone prohibits any conclusion that the claims recite an abstract idea. *Cf. EON Corp. IP Holdings LLC v. AT & T Mobility LLC*, 785 F.3d 616, 621-23 (Fed. Cir. 2015) (discussing special purpose computers).

The asserted claims also recite a “mobile unit” that has concrete structural elements. The mobile unit, for example, must be capable of determining the vehicle’s position using positioning technology. The patent specification identifies several suitable positioning systems, such as GPS and LORAN-C. (’377 patent at 5:5-52.) Three asserted claims (6, 17, and 25) specify that the mobile unit include a GPS receiver to determine the vehicle’s position. The requirement of a mobile unit that includes positioning technology (specifically GPS for some claims) also prohibits a finding that the claims are directed to an abstract idea. *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1332-33 (Fed. Cir. 2010) (finding the presence of a GPS receiver in the claims places a “meaningful limit” on the scope of the claims because it plays a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly); *see also* U.S. Patent and Trademark Office, Examples: Abstract Ideas, Example 4. Global Positioning System, at 10-13 (Jan. 27, 2015), available at <http://1.usa.gov/1H5CZ5w> (attached as Exhibit B).

Other asserted claims require that the mobile unit include additional, specific elements. For example, claims 8, 19, and 30 require that the mobile unit include a speaker for audible communications regarding the next way point in the route (which was provided by the remote

dispatch). In addition, claims 9, 21, and 32 require that the mobile unit include a display sufficient to show the location of the way points received from the dispatch on a map. These specific structures further remove the claims from the realm of an abstract idea. *E.g., Versata Software, Inc. v. Zoho Corp.*, No. 13-00371, 2015 WL 6506368, at *2-3 (W.D. Tex. Oct. 26, 2015) (finding claims directed to a graphical display on a mobile device that can be updated as information changes did not embody an abstract idea).

The asserted claims also recite various aspects of a cellular telephone network for communication between the dispatch and mobile unit. For example, the claims that depend from claim 12 all require that the mobile unit comprise a cellular telephone. Similarly, the dependent claims associated with claims 1 and 23 all require that the communication link include the cellular telephone network.

Finally, when viewed as a whole, the claims organize all of this specialized equipment in a specific way to provide a more frequent and accurate expected arrival time, as well as audible information on an upcoming way point and a map display. Specifically, the remote dispatch provides information to the mobile unit required to determine an accurate expected time of arrival, including a plurality of way points, traffic/weather information, and expected travel speeds. The claims also require that mobile unit's positioning device determine the location of the vehicle, and then require that the mobile unit use that location with the information provided by the dispatch to determine an expected arrival time. The overall system provides further evidence that the claims are not directed to an abstract idea. *E.g., Murphy Oil Corp.*, No. 2:13-CV-791-RSP, at 4-6 ("This system of interconnected physical devices—implemented in a specialized manner to control the display and management of product prices—stands in stark contrast to the recitation of a general computer performing generic computer functions in relation

to an abstract concept.”); *Chamberlain Grp., Inc. v. Linear LLC*, No. 14-05197, 2015 WL 4111456, at *7-9 (N.D. Ill. July 7, 2015) (finding claims directed to opening and closing a garage door over a computer network were not an abstract idea).

3. Humans are incapable of performing the claimed inventions.

Defendants’ extreme oversimplification of the claims is reflected in their flippant and irrelevant examples of human activity—first among them being a third grader estimating the time to walk to the school bus stop. (*See* Br. at 7-8.) For multiple reasons, Defendants’ examples of human activity fail to show that the claims are directed to an abstract idea.

As an initial matter, Defendants’ examples do not address the dispatch, mobile unit, GPS receiver, or other specialized claim elements. Defendants instead compare only the functional elements of claim 23 to Billy’s request for a ride from his apartment to the airport. (Br. at 9.) Here again, Defendants fail to analyze the entirety of the claims.

As to the functional elements, first, and most importantly, humans do not and cannot determine an expected time of arrival *as claimed*. Determining an expected arrival time by comparing the distance to an upcoming way point and then accounting for the expected travel speed and any traffic or weather delays, as required by the claims, is not a conventional human practice. Instead, humans typically estimate an arrival time in their minds by simply recalling how long it took to travel from one point to another in the past, and then using that recollection to estimate an arrival time for the current trip. Even in the rare situation where a human passed a sign on the interstate stating the exact mileage to a way point, with the vehicle on cruise control, no traffic, and clear skies, a human could not replicate this feat “as the vehicle changes position throughout the trip” — which is required by the agreed-upon construction of the phrase “determine in response to the vehicle position” that appears in every asserted claim. (D.I. 167 at 6 n.2.) Humans cannot continuously account for the changing position of a vehicle throughout a

trip and update the expected time of arrival of the vehicle based on the changing position.

Second, humans cannot themselves determine the information generated by the specialized equipment to calculate an expected arrival time, which is why the claims recite a dispatch (that provides way points, expected travel speeds, and traffic) and a mobile unit (that can determine the vehicle's position). For instance, humans cannot determine precisely where they are on a route at a given point in time relative to the next way point and then calculate the expected time of arrival based on the expected speed at that very instant. Likewise, humans cannot determine the impact of traffic or weather on the expected arrival time. Defendants' answer to this problem – that the driver of a vehicle could ascertain traffic or weather information “simply by looking out the windshield of his vehicle” – makes little sense. A person looking out their windshield might be able to see that traffic is heavy or light at the vehicle's current position, but has no way to know the traffic conditions for the remainder of the route or even estimate the impact on their travel time based solely on what appears out their windshield.

Systems that determine an expected time of arrival were first developed because humans cannot actually make such a determination with a useful level of accuracy. The claimed systems and methods improved upon those existing systems. *Vehicle IP, LLC*, 594 Fed. App'x at 638. Accordingly, Defendants' abstract-idea argument based on humans fails to satisfy step one of the § 101 inquiry. *Contentguard Holdings, Inc. v. Amazon.com, Inc.*, No. 13-01112, 2015 WL 5853984, at *4-5 (E.D. Tex. Oct. 5, 2015) (finding a claim could not be practiced by a human because a library could not prevent unauthorized use, it could only punish a patron after the fact); *cf. Execware, LLC v. BJ's Wholesale Club, Inc.*, No. 14-233-LPS, 2015 WL 4275314, at *14 (D. Del. July 15, 2015) (adopted in part, rejected in part) (finding Defendants' pen and paper analogy flawed because it “did not accomplish the goals of the invention or produce its actual effect”);

California Inst. of Tech. v. Hughes Commc'ns Inc., 59 F. Supp. 3d 974, 994-95 (C.D. Cal. 2014) (noting that many inventions can be theorized with a human, pencil, and paper, “but pencil and paper can rarely produce the actual effect of the invention”).

Defendants wrongly argue that the claims are abstract because an expected time of arrival can be determined by a mathematical formula. (Br. at 8.) But the fact that the determination of an expected time of arrival can be performed through the application of a mathematical formula fails to render the recited claims abstract. For example, in *Mobile Telecoms. Tech., LLC v. Leap Wireless Int'l, Inc.*, the court rejected an argument that claims to transmitting “paging carriers” in a “bandlimited channel” were directed to abstract idea because some portion of the claim can be expressed mathematically. No. 2:13-cv-885, D.I. 194 at 4-7 (E.D. Tex. Sept. 23, 2015) (attached as Exhibit C); *see also Wavetronix LLC v. Iteris, Inc.*, No. 14-00970, 2015 WL 300726, at *6 (W.D. Tex. Jan. 22, 2015) (rejecting an argument that the claims recited an abstract idea because it employed a mathematical formula).

4. Defendants' cases are inapposite.

Defendants' reliance on *Wireless Media* and *Macropoint* is misplaced. Those cases do not stand for the proposition that “location-based” patents are directed to abstract ideas, but rather for the unremarkable proposition (stated in *Alice*) that a computer by itself cannot be the sole physical or tangible apparatus in a claim that covers conventional human activity. In *Wireless Media*, for example, the only apparatus in the claims was a generic computer that helped monitor the location of packages. *Wireless Media Innovations, LLC v. Maher Terminals, LLC*, No. 14-7004, 2015 WL 1810378, at *9 (D.N.J. Apr. 20, 2015). The court characterized the movement of the containers as “the mere presence of a physical step to collect data” that was insufficient to render the claim non-abstract. *Id.* at *9-10 (stating that the claimed steps could be

carried out by human memory, by hand, or by conventional equipment and general purpose computer and printer resources).

The '377 patent claims are directed to tangible, physical, and concrete apparatus and processes. *See Fuzzysharp Techs. Inc. v. Intel Corp.*, No. 12-04413, 2013 WL 5955668, at *13 (N.D. Cal. Nov. 6, 2013) (noting that the question is whether “the claims in the patents-in-suit implicate particular physical elements beyond a generic computer environment for carrying out their steps”). Moreover, humans are incapable of practicing the asserted claims in their entirety.

B. Even if They Were Directed to an Abstract Idea, the Claims Recite Inventive Concepts.

1. The '377 patent claims do not raise any preemption concerns.

The concern that drives the exclusion of abstract ideas as patentable subject matter is one of preemption. *Alice*, 134 S. Ct. at 2354, 2358 (“the pre-emption concern . . . undergirds our § 101 jurisprudence”); *Bilski*, 561 U.S. at 611-12 (patenting an abstract idea “would pre-empt the use of this approach in all fields, and would effectively grant a monopoly over an abstract idea”). The second step in the § 101 analysis focuses on whether the claims “disproportionately tie up the use of the underlying ideas.” *Cronos*, 2015 WL 5234040, at *2 n.3 (quoting *Alice*).

Here, Defendants do not even argue that the asserted claims would preempt the practice of their alleged abstract idea. That is because they cannot. The specialized equipment and specific functions in the '377 patent claims make any preemption argument untenable and undermines Defendants' position that the claims lack an inventive concept. *France Telecom S.A. v. Marvell Semiconductor Inc.*, 39 F. Supp. 3d 1080, 1091-92 (N.D. Cal. 2014) (noting the importance of preemption to the § 101 inquiry).

While the claims may offer the best solution available for determining expected arrival times, they leave other parties ample room to practice and innovate in the field. *See Intellectual*

Ventures I LLC v. Mfrs. & Traders Trust Co, 76 F. Supp. 3d 536, 548 (D. Del. 2014)

(determining the claims “do not preempt all applications of providing customized web pages as they recite a specific method of customizing web pages”). For example, the claims do not cover “stand-alone” systems that are contained entirely in a vehicle because they do not have a dispatch remote to a mobile unit. Although these systems have serious shortcomings, they were developed and sold throughout the life of the ’377 patent. Likewise, systems that determined an expected arrival time at a location other than the mobile unit (or equivalent), while inferior, would fall outside the scope of the claims. The lack of preemption demonstrates that the asserted claims recite an inventive concept and are patent eligible.

2. The claims recite specialized equipment and functions that add significantly more to merely determining an expected time of arrival.

The second step of the § 101 analysis requires that the Court “consider the elements of each claim—both individually and as an ordered combination—to determine whether the additional elements transform the nature of the claim into a patent-eligible application of that abstract idea.” *DDR Holdings*, 773 F.3d at 1255. “This second step is the search for an ‘inventive concept,’ or some element or combination of elements sufficient to ensure that the claim in practice amounts to ‘significantly more’ than a patent on an ineligible concept.” *Id.*

As with step one of the § 101 test, Defendants also fail to properly apply step two. Step two requires not only the consideration of each element individually, but also that the claim elements be considered *as an ordered combination*.² Defendants, however, only address the

² Paul Michel, the former Chief Judge of the Federal Circuit, filed a neutral amicus brief that reconciles the Supreme Court’s Section 101 cases. *See Intellectual Ventures I LLC v. Symantec Corp.*, No. 2015-1769, Dkt. No. 37 (Fed. Cir. Aug. 28, 2015). In that brief, he notes that “courts must consider the claims as a whole in determining Section 101 eligibility, and not dissect claims into old and new elements and then ignore the old elements.” *Id.* at 6–11 (citing *Diehr*) (capitalization omitted).

claim elements in isolation (Br. at 11-15), and thus fail to satisfy their burden of demonstrating the claims are patent ineligible under the second step of the test.

To be clear, even assessed individually, the claim elements provide an inventive concept. These individual elements were addressed at length previously to demonstrate that the claims are not directed to an abstract idea.

But by isolating the claim elements, Defendants ignore the fact that the asserted claims recite a distributed system that includes a remote dispatch and a mobile unit that work together in a particular manner to provide the most accurate expected arrival time and improved features for the driver. The claims recite specific, tangible, special purpose equipment (such as a dispatch that manages and monitors vehicles and a mobile unit that includes a GPS receiver, cellular telephone, display, and speaker), and require that this specialized equipment function in an organized, narrowly-tailored, and unconventional way. This claimed system improves on existing vehicle navigation systems and provides a more accurate determination of the expected time of arrival. The combination of claim elements amounts to something significantly more than merely determining an expected time of arrival.

The Court need look no further than the Defendants' "taxi ride" example to understand the claimed inventive concept. Unlike the current claims, the taxi driver must guess the distance between his current position and the next way point, guess the expected travel speeds to the way point, "look[] out the windshield" to determine the effect of weather and traffic, guess an expected time of arrival, and then somehow do that repeatedly as the vehicle travels throughout the route. In contrast, the claimed system allows the delivery of precise information regarding vehicle location, way points, expected travel speeds, and traffic, to determine a more accurate expected time of arrival. The patented system eliminates the guesswork. *Cf. Diamond v. Diehr*,

450 U.S. 175 (1981) (finding patent eligible a combination of claim elements used to eliminate the guesswork with existing, inaccurate industrial process for curing synthetic rubber).

3. The claimed inventions are rooted in computer technology to address problems that existed in previous computer-based systems.

Courts have recognized that claims are patent eligible where the claimed inventions are “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR Holdings*, 773 F.3d at 1257; *see Intellectual Ventures I, LLC v. Motorola Mobility LLC*, 81 F. Supp. 3d 356, 369 (D. Del. Feb. 24, 2015) (Robinson, J.). Contrary to Defendants’ characterizations, the patented systems and methods were not simply an attempt to replicate human activity. As discussed previously, the human mind is not capable of determining an expected time of arrival as claimed, and it would be pointless in any event to replicate the activity of humans in such a system.

The claimed inventions instead solve the problems associated with existing computer-based systems. *Vehicle IP, LLC*, 594 Fed. App’x at 638 (stating that “[t]he ’377 patent is directed to improving vehicle navigation systems through more efficient distribution of navigation functions between a remote dispatch and a mobile unit located in the vehicle.”) The patent’s Background begins with a discussion of “mobile communications technology” and the desire for customers of this technology to obtain “an accurate determination of their expected time of arrival” (’377 patent at 1:15-35.) Nowhere does the patent state a desire to replicate the type of human activity discussed in *Bilski* and *Alice*, but rather the invention seeks to solve shortcomings that first arose with the advent of mobile communications technology. *See DDR Holdings*, 773 F.3d at 1257 (distinguishing patentable claims because they do not merely recite the performance of some known business practice along with the requirement that it be performed with technology).

Although the technology here is different, the scenario here closely resembles that in *DDR Holdings*, which involved claims directed to generating a composite web page that combined elements of a host website with content of a third-party merchant. 773 F.3d at 1248. Under the first step of the § 101 analysis, the Federal Circuit noted that the claims address a business challenge (retaining website visitors), but it was a challenge particular to the Internet. *Id.* at 1256-57. The court found that although the claims involve both a computer and the Internet, they stood apart because “they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.* at 1257.

As in *DDR Holdings*, the claims here address a challenge faced by computer-based mobile communications systems. The solution involved a distributed system with specific equipment and functions split between the remote dispatch and mobile unit to provide the most accurate expected arrival time and improved features for the driver. Defendants’ focus on human activities are inapt. These examples do not relate to the challenges of providing accurate, cost-effective systems and methods for determining an expected time of arrival with a computer-based system. As such, the patents in suit are necessarily rooted in computer technology to overcome a problem specifically arising in the realm of computer-based systems.

4. The asserted claims pass the machine-or-transformation test.

Although not definitive on its own, the machine-or-transformation test remains a “useful and important clue” for determining patent eligibility. *Bilski*, 561 U.S. at 604-05. Under the machine-or-transformation test, a claim satisfies § 101 either by showing that the claim is tied to a particular machine or apparatus or by showing the claim transforms an article. *Id.* at 603-04.

The ’377 claims satisfy the first category of patent-eligible subject matter because the

asserted claims are all tied to particular equipment. For example, the “dispatch” is “not just any computer-based system remotely located from the vehicle,” (D.I. 167), but a remote, computer-based system that manages and monitors vehicles. As discussed previously, it also performs specific, unconventional functions such as providing destination to a mobile unit that includes a plurality of way points, expected travel speeds, and traffic/weather information. The claimed mobile unit is also a particular machine that comprises a positioning device (such as a GPS receiver), a cellular telephone, a map display, and a speaker. Moreover, the dispatch and the mobile unit create a system where specific functions are split between them in that information is supplied by the dispatch and the mobile unit determines the vehicle’s position and then uses that position information with the way points, expected speeds, and traffic information to determine an expected time of arrival, audibly communicate the next way point, and display the way points on a map. These functions further established the specialized nature of the claimed equipment.

VI. CONCLUSION

For the foregoing reasons, Defendants’ motion for judgment of invalidity under 35 U.S.C. § 101 should be denied.

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